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IS 2487 (1972): Flat Steel Healds (Excluding Jacquard Leno Weaving Healds) [TXD 14: Machinery for Fabric Manufacture]

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Edition 2.1
(1992-10)

UDC 677.058-12

Indian Standard

SPECIFICATION FOR FLAT STEEL HEALDS (EXCLUDING JACQUARD AND LENO WEAVING HEALDS)

(First Revision)

(Incorporating Amendment No. 1)

Heads and Reeds Sectional Committee, TDC 22 [Ref Doc TDC 22 (1382)]

1. Scope — Prescribes requirements for flat steel healds of the following two types for cotton, silk, woollen and worsted weaving (excluding jacquard and leno weaving):

a) Simplex type (*see* Fig. 1A), and

b) Duplex type (*see* Fig. 1B).

2. Manufacture

2.1 *Material* — Cold rolled steel flat strip highly polished and having round smooth edges. Carbon content of the strip shall be between 0.5 to 0.7 percent (*see* IS : 1570-1961 Schedules for wrought steels for general engineering purposes)

Note — The tensile strength of strip should not be less than 110 kgf/mm^2 when determined by the method given in IS : 1521-1960 'Method for tensile testing of steel wire'

2.2 *Plating* — Unless otherwise agreed to between the buyer and the seller, the healds shall be plated with cadmium, nickel or chromium in accordance with IS : 1068-1968 'Electroplated coatings of nickel and chromium on iron and steel (*first revision*)' or IS : 1572-1968 'Electroplated coatings of cadmium on iron and steel (*first revision*)', as the case may be. The plating should be smooth and free from cracks and other flaws which cause breakage of yarn.

2.3 *Freedom from Defects* — The healds shall be free from any surface defects, such as cracks, burrs or any other flaw which causes breakage of yarn. Thread eye shall not have any sharp corners

3. Dimensional Requirements — The cross section of strip and the dimensions of thread eye shall be as given in Fig. 1.

4. Designation — Flat steel healds shall be designated as follows:

Type × Variety × Length (in millimetres)

Example:

Simplex × H_1 × 330 mm

5. Packing — 500 or 1 000 healds should be put on steel strip having suitable locking arrangements at both the ends and packed so as to form a hank or leaf. The hanks or leaves shall be packed in packages of suitable size.

6. Marking — Each package shall be marked with the following information:

a) Name of the article;

b) Designation;

c) Manufacturer's name, initials or trade-mark, if any;

d) Number of hanks; and

e) Batch No. to trace back the history of production.

6.1 *ISI Certification Marking* — Details available with the Indian Standards Institution, New Delhi 1.

7. Sampling — Unless otherwise agreed to between the buyer and the seller, the procedure given in IS : 2500 (Part I)-1963 'Sampling inspection tables: Part I Inspection by attributes and by count of defects' shall be followed for sampling inspection. The single sampling plan corresponding to inspection level IV and an AQL of 4.0 percent [*see* Tables 1 and 2 of IS : 2500 (Part I)] shall be adopted for the various visual and dimensional characteristics specified in the standard.

Adopted 30 November 1972	© BIS 2002	**Price Group 1**

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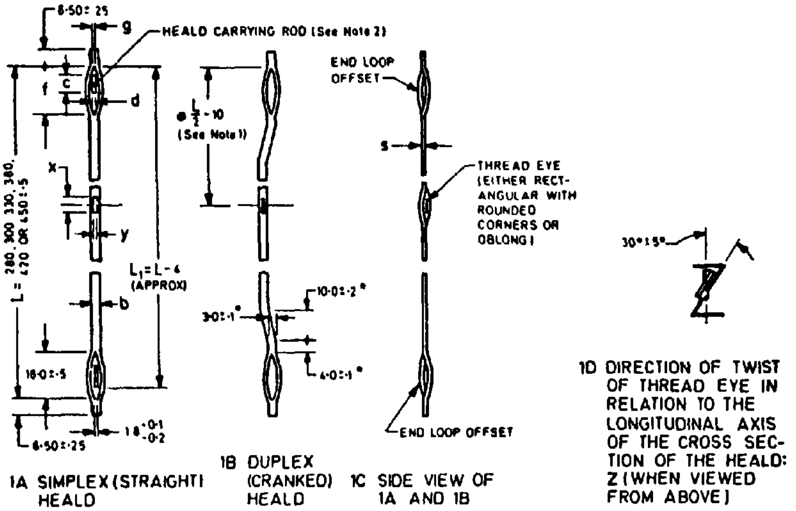

1A SIMPLEX (STRAIGHT) HEALD

1B DUPLEX (CRANKED) HEALD

1C SIDE VIEW OF 1A AND 1B

1D DIRECTION OF TWIST OF THREAD EYE IN RELATION TO THE LONGITUDINAL AXIS OF THE CROSS SECTION OF THE HEALD: Z (WHEN VIEWED FROM ABOVE)

*Optional

Variety	Cross Section of Strip		Thread Eye	
	b	*s*	*x*	*y*
H_1	1.8	0.25	5.0	1.0
H_2	2.0	0.30	5.5	1.2
H_3	2.3	0.35	6.0	1.5
H_4	2.3	0.50	6.0	1.5
H_5	2.6	0.40	6.5	1.8
H_6	3.0	0.45	7.0	2.0
H_7	4.5	0.50	8.0	2.5
Tolerance	± 0.1	± 0.01	± 0.1	± 0.1

Note 1 — If prescribed by the buyer, thread eye may be at the centre of the heald In that case, top end loop should be distinctly marked in order to avoid a heald being put upside down on the heald carrying rod.

Note 2 — For weaving heavy fabrics, thicker heald carrying rods are used Recommended dimensions of end loops suitable for various sizes of heald carrying rods are given below

c	*d*	*f*	*g*
9	1.5	16	1.8
9	2.5	16	2.8
12	2.5	20	2.8

All dimensions in millimetres

FIG. 1 TYPICAL SIMPLEX AND DUPLEX FLAT STEEL HEALDS

EXPLANATORY NOTE

In the formulation of this standard, considerable assistance has been derived from the following publications:

ISO/R 363-1964 Flat steel healds for general use. International Organization for Standardization.

BS 3182-1969 Healds, heald frames and reeds. British Standards Institution.

This edition 2.1 incorporates Amendment No. 1 (October 1992). Side bar indicates modification of the text as the result of incorporation of the amendment.